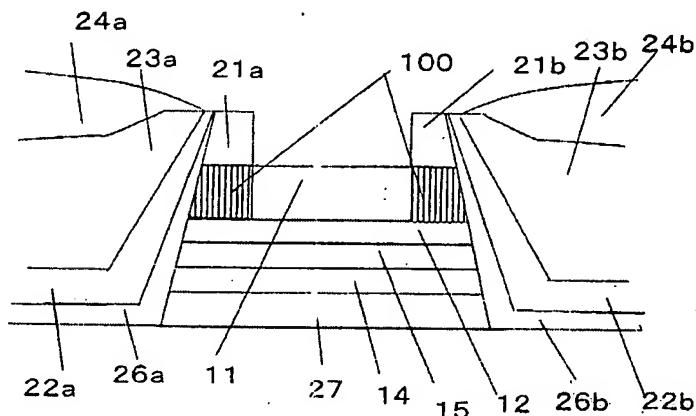


REMARKS/ARGUMENTS

Claim 1 is amended by this response. No claims are canceled or added. Accordingly, following entry of these amendments and remarks, claims 1-6 and 17-18 will remain pending.

Embodiments in accordance with the present invention relate to composite magnetic heads. In particular, the specific embodiment of Fig. 6 shows first electrodes (21a, 21b) within second electrodes (24a, 24b):



As a result of this configuration, in the direction of the track width, the width between the first electrodes (21a, 21b) is smaller than the width between the second electrodes (24a, 24b).

As described in the specification at least at ¶[0009], the first electrodes overcome the problem of a region of low sensitivity on both ends of the sensor portion joined with the domain control layers (22a, 22b in Figure 6). The first electrodes also allow selective use of a central track portion with high sensitivity, and provide a magnetic head with high sensitivity while keeping the domain control layer (also referred to as the hard magnetic layer) relatively thick. The production yield is also prevented from being lowered by variation in the thickness of the hard magnetic layer. In a conventional head lacking the first electrodes and having only a single pair of outside electrodes, the element resistance is undesirably likely to increase.

Accordingly, pending claim 1 (reproduced in part below) recites a magnetic head having first and second electrode layers in the configuration shown in Figure 6:

1. A composite magnetic head comprising:
... first electrode layers disposed respectively on the non-magnetic regions of the anti-ferromagnetic layer;

... second electrode layers disposed above the magnetic domain control layers;

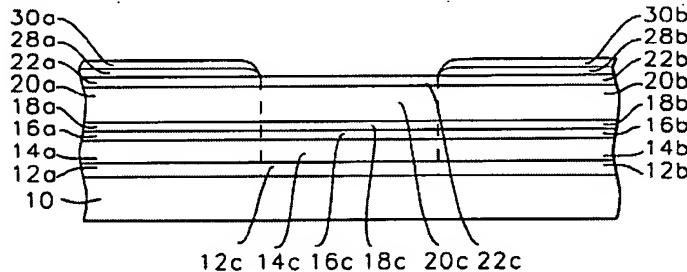
an upper gap layer disposed above the second electrode layers and the stack of layers;

... wherein a width in a track width direction between the first electrode layers is smaller than a width in a track width direction of between the second electrode layers.

Claims 1-6 and 17-18 stand rejected as obvious based upon U.S. Patent No. 6,383,574 to Han et al. ("the Han patent"). These obviousness claim rejections are overcome as follows.

As a threshold matter, the Examiner is respectfully reminded of a first requirement to establish a *prima facie* case of obviousness: "the prior art reference (or references when combined) must teach or suggest all of the claim limitations." (MPEP 2143). Here, the Han patent fails to teach or even suggest a magnetic head structure having first and second electrodes oriented in the manner claimed.

In the latest office action, the Examiner repeatedly relied upon Figure 4 (reproduced in part below) of the Han patent as teaching the claimed embodiments.



Specifically, the Examiner cited layers 22a, 22b as corresponding to the claimed first electrode layers, and layers 30a and 30b as corresponding to the claimed second electrode layers.

However, careful inspection of FIG. 4 indicates that layers 30a and 22a, and layers 30b and 22b respectively, are coextensive with one each other. There is no teaching, or even suggestion here, that a width in a track width direction between first electrode layers, be smaller than a width in a track width direction of between second electrode layers. Rather, by failing to employ the claimed configuration of the first and second electrodes, the sensor structure of the

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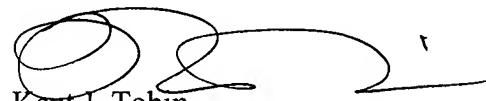
PATENT

Han patent would be expected to experience a low sensitivity region on the both sides of the non-ion implanted regions of a free layer due to the magnetic bias layers.

Based at least upon the failure of the Han patent to teach or suggest each of the elements of the pending claims, it is respectfully asserted that no conclusion of obviousness can reasonably be drawn from this reference. Continued rejection of the pending claims is therefore improper, and the claim rejections should be withdrawn.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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